

Application No.: 10/743,390
Response dated November 28, 2005
Office Action dated August 4, 2005

Docket No.: 21581-00311-US

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claims 2, 3, 7-10, 12, 13 and 16-20 without prejudice to their reentry at some later date.

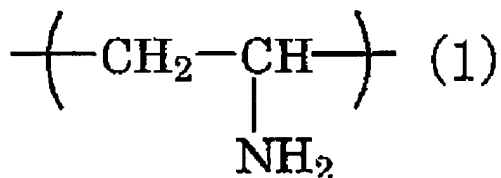
1. (Currently Amended) A pretreatment method for subsequent coating comprising ~~pretreating~~ treating a surface substance to be treated with a chemical conversion coating agent to form a chemical conversion coat,

wherein the chemical conversion coating agent comprises fluorine and at least one ~~kind~~ member selected from the group consisting of zirconium, titanium and hafnium ~~and fluorine~~,

the chemical conversion coat has a fluorine concentration of 10% or less on ~~the~~ an atom ratio basis of the chemical conversion coat, and

at least a part of the ~~substance~~ surface to be treated is an iron material; and

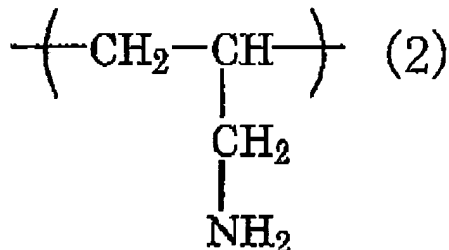
wherein the chemical conversion coating agent further contains at least one member selected from the group consisting of magnesium, calcium, zinc, a silicon-containing compound and copper; and further contains at least one member selected from the group consisting of a water-borne resin containing an isocyanate group or a melamine group or both (i), a water-borne resin, and at least one member selected from the group consisting of a mixture of a polyisocyanate compound and a melamine resin and mixtures thereof (ii) and a water-soluble resin having a constituent unit expressed by the chemical formula (1):



or the chemical formula (2):

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or both in at least a part thereof (iii); and wherein said chemical conversion coating agent substantially contains no phosphate ions.

2-3 (Cancelled)

4. (Previously Presented) The pretreatment method for coating according to Claim 1, wherein the chemical conversion coat is heated and dried at a temperature of 30°C or more after the treatment by the chemical conversion coating agent in order to set the fluorine concentration in the chemical conversion coat to 10% or less on the atom ratio basis.

5. (Previously Presented) The pretreatment method for coating according to Claim 1, wherein the chemical conversion coat is treated at a temperature from 5 to 100°C with a basic aqueous solution having a pH of 9 or more after the treatment by the chemical conversion coating agent in order to set the fluorine concentration in the chemical conversion coat to 10% or less on the atom ratio basis.

6. (Currently Amended) The pretreatment method for coating according to Claim 1, wherein the chemical conversion coating agent contains 20 to 10000 ppm of at least one kind member selected from the group consisting of zirconium, titanium and hafnium in terms of metal total atoms of zirconium, titanium and hafnium and has a pH of 1.5 to 6.5.

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7-10 (Cancelled)

11. (Previously Presented) The pretreatment method for coating according to Claim 4, wherein the chemical conversion coat is treated at a temperature from 5 to 100°C with a basic aqueous solution having a pH of 9 or more after the treatment by the chemical conversion coating agent in order to set the fluorine concentration in the chemical conversion coat to 10% or less on the atom ratio basis.

12-13 (Cancelled)

14. (Currently Amended) The pretreatment method for coating according to Claim 4, wherein the chemical conversion coating agent contains 20 to 10000 ppm of at least one ~~kind member~~ selected from the group consisting of zirconium, titanium and hafnium in terms of metal, and has a pH of 1.5 to 6.5.

15. (Currently Amended) The pretreatment method for coating according to Claim 5, wherein the chemical conversion coating agent contains 20 to 10000 ppm of at least one ~~kind member~~ selected from the group consisting of zirconium, titanium and hafnium in terms of metal, and has a pH of 1.5 to 6.5.

16-20 (Cancelled)